

REMARKS

In response to the above-identified Office Action, Applicant amends the application and seeks reconsideration thereof. In this response, Applicant amends Claim 12. Applicant does not cancel any claims or add any new claims. Accordingly, Claims 1-22 are pending.

I. In the Drawings

Applicant submits a proposed amendment to Figure 1 for approval by the Examiner in accordance with 37 CFR 1.84. The proposed amendment is submitted to comply with the Examiner's request to supply the missing reference numerals 104 and 112 mentioned at page 2, paragraph 10 of the specification. Specifically, numeral 109 is replaced with numeral 104, and numeral 112 is added in reference to the AGP. The replacement drawing is submitted on a separate sheet attached to this Response.

II. In the Specification

Applicant has amended paragraphs 11, 17 and 19 to correct typographical errors.

III. Claims Rejected Under 35 U.S.C. § 112

Claim 12 stands rejected under 35 U.S.C. § 112, second paragraph because the phrase "the plurality of cores" lacks an antecedent basis. Applicant has amended Claims 12 to depend upon Claim 11 as suggested by the Examiner. Reconsideration and withdrawal of the rejection are respectfully requested.

IV. Claims Rejected Under 35 U.S.C. § 102

Claims 1, 2, 4, 18, 19, and 21 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,399,290 B1 issued to Dye, et al. ("Dye"). Applicant respectfully traverses the rejection.

To anticipate a claim, the Examiner must show that a single reference teaches each of the elements of that claim. Among other elements, Claims 1 and 18 recite "filtering the texel values through a programmable filter." Dye at least does not teach this element. Rather, Dye teaches a

selectable mode filter 400 that performs point sampling, two texel averaging, or four texel averaging (Abstract and Fig. 4). Thus, the selectable mode filter 400 only has three filtering modes from which a user may select (Fig. 8). The selection of one of the three filtering modes is based on a control signal generated by a state machine 230 (Fig. 5 and col. 7, lines 53-56). Applicant has explicitly defined programmable to mean "capable of executing a software program consisting of one or more instructions from a defined instruction set" (See ¶ 13 of the application as filed). Applicant is entitled to be his own Lexicographer and has explicitly availed himself of this right. Accordingly, since at a minimum Dye fails to disclose the programmable filter of Claims 1 and 18, Dye does not teach each of the elements of Claims 1 and 18. Accordingly, reconsideration and withdrawal of the anticipation rejection of 1 and 18 are requested.

In regard to Claims 2, 4, 19 and 21, these claims depend from independent Claims 1 and 18 and incorporate the limitations thereof. Thus, at least for the reasons mentioned in regard to claims 1 and 18, Dye does not anticipate these claims. Accordingly, reconsideration and withdrawal of the anticipation rejection of Claims 2, 4, 19, and 21 are requested.

V. Claims Rejected Under 35 U.S.C. § 103(a)

Claims 3 and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Dye. Applicant respectfully disagrees for the following reasons.

To establish a *prima facie* case of obviousness, the Examiner must show the cited references, combined, teach or suggest each of the elements of a claim. Claims 3 and 20 respectively depend from Claims 1 and 18 and incorporate the limitations thereof. Thus, for at least the reasons mentioned above in regard to Claims 1 and 18, Dye does not teach each of the elements of Claims 3 and 20.

Further, Dye does not suggest the programmable filter recited in Claims 1 and 18 and incorporated by Claims 3 and 20. A filter having three selectable modes as taught by Dye does not suggest a programmable filter as the terms are defined by Applicant. Thus, Dye does not suggest

each of the elements of Claims 3 and 20. Accordingly, reconsideration and withdrawal of the obviousness rejection of 3 and 20 are requested.

Claims 5, 6, and 22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Dye in view of U.S. Patent No. 6,867,788 B2 issued to Tang, et al. ("Tang"). Applicant respectfully disagrees for the following reasons.

In regard to Claims 5 and 22, Claims 5 and 22 respectively depend from Claims 1 and 18 and incorporate the limitations thereof. Tang fails to cure the differences of Dye as discussed with reference to claims 1 and 18 above.

Specifically, Tang also does not teach or suggest the programmable filter. Tang teaches a system and method for rendering a polygon (Abstract). The graphics system taught by Tang includes a texture filter 170 to perform bilinear, trilinear, or quadlinear interpolation (Fig. 5 and col. 9, lines 7-8). A filter that performs pre-defined interpolation is not a programmable filter as the operations of the filter cannot be altered by a program. Tang's disclosure also does not teach or suggest that the filter 170 is capable of execution a software program as required by Applicant. Thus, Tang does not teach or suggest each of the elements of Claims 1 and 18. Thus, Dye in view of Tang does not teach or suggest each of the elements of Claims 5 and 22.

In regard to Claim 6, Claim 6 recites a programmable texture filtering module in communication with the fragment processing module to programmably filter texture data corresponding to at least one pixel by executing a software program. For the similar reasons mentioned above, Dye in view of Tang does not teach or suggest a programmable texture filtering module. Accordingly, reconsideration and withdrawal of the obviousness rejection of 5, 6, and 22 are requested.

Claims 7, 8, 11, and 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Dye, Tang and further in view of U.S. Pre-Grant Patent Publication No. 2004/0227765 A1 applied for by Emberling ("Emberling"). Applicant respectfully traverses this rejection.

Claims 7, 8, 11, and 12 depend from Claim 6 and incorporate the limitations thereof. Thus, at least for the reasons mentioned above in regard to Claim 6, Dye in view of Tang does not teach or suggest a programmable texture filtering module executing a software program.

The Examiner characterizes Emberling as teaching a programmable filter comprising a plurality of registers, and specifically points to Emberling's filtering engine 600 as the programming filter. Applicant submits that Emberling does not teach or suggest a programmable texture filtering module executing a software program as recited by Claim 6. Applicant notes that the filtering engine 600 taught by Emberling is not a programmable filter and does not filter texture data.

The Examiner asserts that Emberling's filtering engine 600 is a programmable filter because it has programmable parameters, e.g., the values of the start position for the first virtual pixel center, the step sizes between virtual pixel centers, and the number of pixels in a given stripe (paragraphs 95, 118, and 119). Emberling teaches that these values are dynamically adjustable from host software (paragraph 119). However, the filtering engine 600 is not a programmable filter as recited in Claim 6 for analogous reasons to those discussed above with reference to Dye. At most, the filtering engine 600 is configurable for having adjustable parameters by executing a software program on a host. Emberling's filtering engine 600 is not capable of executing a software program. Rather, a host computer executes a software program to configure the parameters of the filtering engine 600. Thus, Emberling does not teach or suggest a programmable filter as recited in Claim 6.

Further, Emberling's filtering engine 600 does not filter texture data. Rather, the filtering engine 600 filters the rendered samples in the sample buffer 500 to generate video pixels (paragraphs 95 and 98). Emberling discloses at step 465 of Fig. 4 that texel filtering is performed by a rendering pipeline RP, which is part of the rendering engine 300 (Figs. 2 and 3, and paragraph 87). The rendering engine 200 is physically separated and functionally distinct from the filtering engine 600 (Figs. 1). The Examiner has not identified and Applicant has been unable to discern any part of Emberling that teaches or suggest the use of the rendering engine 300 to

programmably filter the texture data. Thus, Emberling does not teach or suggest each of the elements of Claims 6 and its dependent Claims 7, 8, 11, and 12. Thus, Dye in view of Tang and further in view of Emberling does not teach or suggest each of the elements of Claims 7, 8, 11, and 12. Accordingly, reconsideration and withdrawal of the obviousness rejection of Claims 7, 8, 11, and 12 are requested.

Claims 13-17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Emberling in view of Tang. Applicant respectfully disagrees for the following reasons.

Claim 13 recites a plurality of texture processing cores (TPC) coupled to the memory to programmably filter texture data by executing a software program. Similar to the rejection of Claims 7, 8, 11, and 12, the Examiner characterizes Emberling's filtering engine 600 as a programmable filter. Applicant submits that for at least the reasons mentioned above in regard to Claims 7, 8, 11, and 12, Emberling does not teach or suggest the programmable filtering of texture data recited in Claims 13. Likewise, for at least the reasons mentioned above in regard to Claims 5 and 22, Tang also does not teach or suggest the programmable filtering. Thus, Emberling in view of Tang does not teach or suggest each of the elements of Claim 13. Accordingly, reconsideration and withdrawal of the obviousness rejection of Claims 13 are requested.

Claims 14-17 depend from Claim 13 and incorporate the limitations thereof. Thus, at least for the reasons mentioned above in regard to Claim 13, Emberling in view of Tang does not teach or suggest each of the elements of Claims 14-17. Accordingly, reconsideration and withdrawal of the obviousness rejection of Claims 14-17 are requested.

VI. Allowable Subject Matter

Applicant notes with appreciation the Examiner's indication that claims 9 and 10 contain allowable subject matter.

CONCLUSION

In view of the foregoing, it is believed that all claims now are now in condition for allowance and such action is earnestly solicited at the earliest possible date. If there are any additional fees due in connection with the filing of this response, please charge those fees to our Deposit Account No. 02-2666. If the Examiner believes that a telephone conference would be useful in moving the application forward to allowance, the Examiner is encouraged to contact the undersigned at (310) 207 3800.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: 6/8, 2005

Thomas Coester
Thomas M. Coester, Reg. No. 39,367

12400 Wilshire Blvd.
Seventh Floor
Los Angeles, California 90025
(310) 207-3800

CERTIFICATE OF MAILING:

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on June 8, 2005.

Lillian E. Rodriguez
Lillian E. Rodriguez

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